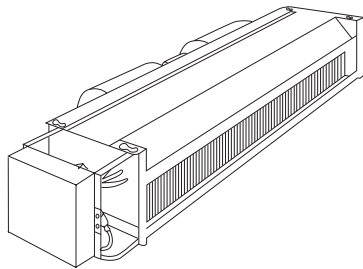


Free Combination Multi-split Type Room Air Conditioner

AE122BCAAA
(H2EM-18H03)



No. 0010572805

- Please read this manual carefully before using
- Please keep this manual for future use

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Operation points

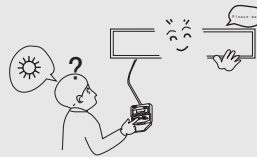
Operation of air conditioner

When the ambient humidity is too high, in COOLING or DEHUMIDIFYING mode, there may be water dropped in the air outlet.



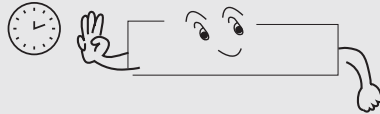
Anti-cold air blowing out

During Heating operation, after starting the unit, the indoor fan motor will not rotate immediately to prevent cold air from blowing out.



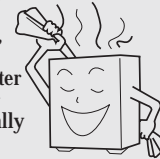
3-minute protection function

If start the unit immediately only after it is turned off, the compressor will start after 3 minutes have elapsed to protect the compressor.



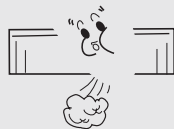
Defrosting function

During Heating operation, when frost formed on the heat exchanger of outdoor unit, the air conditioner will de frost automatically for several minutes. During defrosting, both the fan of indoor and outdoor unit do not run. After finishing defrosting, the air conditioner will automatically resume operation.



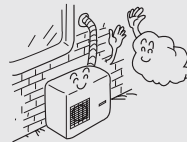
Change of fan speed

In COOLING mode, the air sending is set at AUTO, when the indoor temperature is near the set temperature, the fan speed will lower automatically. In HEATING mode, when room temperature reaches the set temperature, the compressor will stop running, and the fan will change to LOW FAN or stop. In DEHUMIDIFYING mode, the fan speed will change automatically.



Hint

When the air conditioner is in Heating mode, it absorbs heat from outside and release to indoors. So the outdoor temperature may affect the Heating effect.



Power failure resume function (please set and use this function according to actual condition)

After setting power failure resume function, if there is a sudden power failure during unit operation, when power on for again, the unit will resume the previous state.

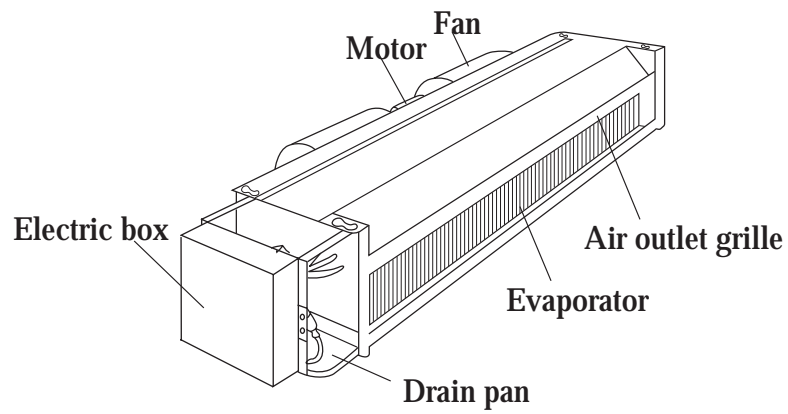
Setting method: when the wire controller is in ON state (except for TIMER and FAN mode), press the SLEEP button for 10 times in 5 seconds, after the buzzer sounds 4 times, the unit will change to POWER FAILURE RESUME function.

Cancellation method: press the SLEEP button 10 times in 5 seconds, after the buzzer 2 times, the POWER FAILURE RESUME function is cancelled.

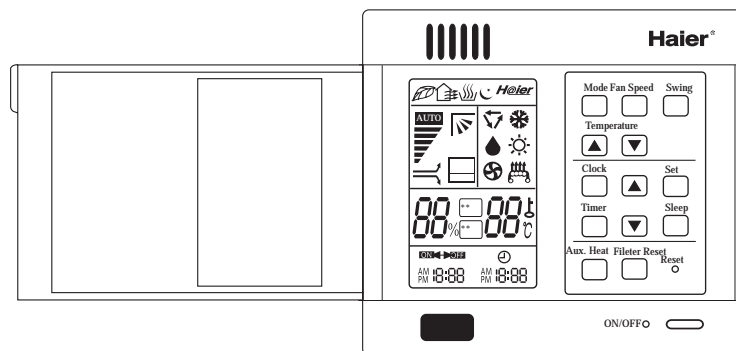
Note: After the unit is set POWER FAILURE RESUME function, if there is a sudden power failure in using, during this period of time if there is no need to use the unit for a long time, please cut off power to prevent the air conditioner from automatically resuming to the previous setting if power failure resumes, or press the ON/OFF button to turn off the unit after power failure resumes.

Name of Parts

Indoor unit

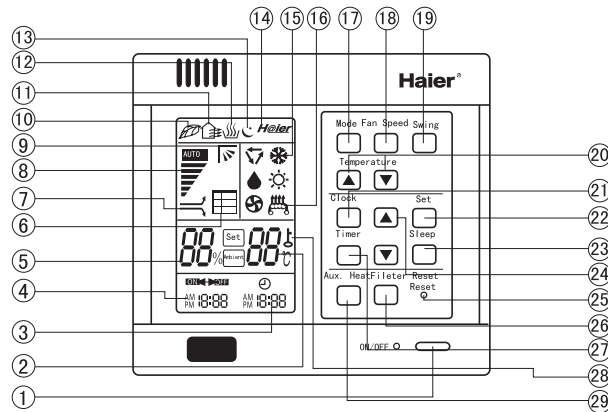


Wire controller



Name of Parts

Wire controller



1.ON/OFF button

Used to turn on/off unit

2.Temperature display

3.Clock display

4.Timer ON/OFF display

5.Humidity display

6.Air filter cleaning display

When there is too much dust collected on the air inlet, the wire controller will show this display to remind the user to clean the air inlet. After cleaning and installation, just press the air filter reset button.

7.Super/Soft operation display

8.Fan speed display



9.Auto Swing display

10.Health state display

11.Fresh air state display

12.Humidifying state display

13.Sleep state display

14.Network control display

15.Working mode display

16.Electric heating display

17.operation mode button

Used to set working mode: Auto, Cooling, Dehumidifying, Heating, Fan

18.Fan speed button

Used to set fan speed: Low Fan, Med Fan, High Fan, Auto

19.Swing button

Used to set Auto Swing or Fixed air sending direction

20.Temperature Setting button

Used to set temperature, temperature range: 16~30°C

21.Clock button

Used to calibrate the time of timer and clock

22.Setting button

Used to confirm the time of timer and clock

23.Sleep button

Used to set Sleep state or PowerFailure Resume Function

24.Time Adjusting button

Used to adjust the time of timer and clock

25.Reset button

When the wire controller appears abnormal condition, use a sharp-pointed article to press this button to make the wire controller resume normal

26.Air Filter Reset button

After cleaning the air inlet, press this button, the unit can start to operate

27.Timer button

Used to set the mode of timer

28.Lock state display

29.Electric heat button

Working mode	Auto	Cooling	Dehumidifying	Heating	Fan
Wire controller					

Note:

- This model does not have the following related display and function 5, 7, 9, 10, 11, 12, 19, 28.
- Non-electric heating type, there is no electric heating button 29 and electric heating display 16.

Calibration of clock

When turning on the unit for the first time, the clock should be calibrated. The method of calibration is:

- Press "Clock" button, the Clock display "AM" "PM" will flash.
- Press ▲ to ▼ just time. For each press, the time will increase or decrease 1 minute. If depressing the button, the time will increase or decrease rapidly.
- After confirming the time, press "Set" button, "AM" or "PM" will stop flashing, the clock will begin to work.

Safety Precautions

- Before starting the unit, please read the following 'Safety Precautions' carefully to guarantee the normal operation of the system.
- The following lists two kinds of safety precautions 'Warning' and 'Notice'. For the items that the improper use may cause death or serious injury are listed in 'Warning' volume. However, sometimes the items listed in 'Notice' volume may also cause serious accidents. So, these two volumes are the important contents related to safety, they must be observed.

	Do not do like this		Do follow the instruction		Do equip with grounding wire
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- After carefully reading this manual, please keep in hand for reference. If the air conditioner is given to a new user, this manual should be attached with unit to the new user.

■ Installation Safety Precautions

⚠ Warning

The system should be applied to places as office, restaurant, residence and the like.



Application to inferior environment such as workshop, it may cause equipment malfunction and serious injury or death.

The system should be installed by your dealer or a professional installer.



Installation by yourself is not encouraged. Because improper installation could cause water leakage, electric shock and fire accident.

⚠ Notice

A creepage breaker must be installed at the installation place



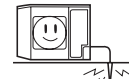
Unless the circuit breaker is installed, it may cause electric shock.

Drain pipe should be arranged properly to provide a smooth drainage.



If the pipe is arranged improperly, furniture or the like may be damaged by the leaked water.

Make sure the system is grounded.



Grounding wire should never be connected to gas pipe, city water pipe, lightning conductor rod or the telephone line. If the grounding wire is not set properly, it may cause

Operation safety precautions

⚠ Warning

Do not let the cold wind blow to human body for a long time.



It may affect the physical condition or cause some health problems.

When any abnormal condition (scorching smell or others) is found, stop operation immediately and turn off the power switch. Then consult your dealer.



If continuing the operation without removing the cause, it may cause trouble, electric shock or fire.

⚠ Notice

Do not handle switches with a wet hand.



It may cause electric shock.

Do not use water to clean the air conditioner.



It may cause electric shock.

Safety Precautions

⚠ Notice

The system should never be used for any other purposes than intended such as for preservation of food, flora and fauna, precision devices or work of art.



It may cause deterioration of the articles.

Do not put or use any spray near the air conditioner, and do not directly spray to the air conditioner.



Otherwise it may cause fire.

Do not put the fire devices in the places, which the air from the air conditioner can directly blow.



It may cause the fire devices cannot burn completely.

Do not install the system where the air outlet may directly reach the flora and fauna.



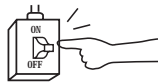
It will not be good for their health.

Only use the proper specified fuse.



If use metal wire or copper wire to replace the fuse, it may cause trouble and fire accident.

Do not use the power switch to turn of or off the air conditioner.



It may cause fire or Creepage.

When operating the system simultaneously with a combustion apparatus, indoor air must be ventilated frequently.



Insufficient ventilation may cause the danger of lack of oxygen.

When cleaning, please stop the unit and cut off the power first.



Do not perform cleaning, when the indoor fan motor is rotating in high speed.

Do not use such equipment as awater heater, etc., around the indoor unit or the wire controller.



If the system is operated at the vicinity of such equipment that generates steam, condensed water may drip during cooling operation or it may cause Creepage or short-circuit.

Do not put the water containers, such as vase, on the unit.



If the water enters into the unit and damages the electric insulation material, it may cause electric shock.

■ Safety precautions when moving, reinstalling and repairing the air conditioner

⚠ Warning

Do not refit the air conditioner. When repair is needed, please contact your dealer.



Improper repair may cause water leakage, electric shock and fire accident.

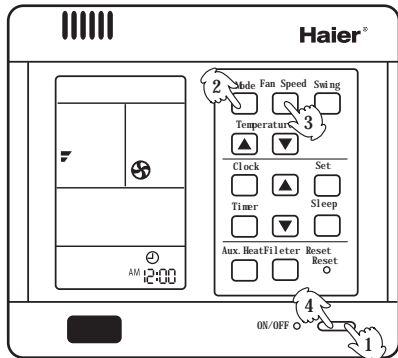
When moving the air conditioner to another installation place, please contact the dealer or the professional installer.



Improper moving and reinstallation may cause water leakage, electric shock and fire accident.

Operation instruction

Fan operation



1 Turn on the unit
Press the ON/OFF button to turn on the unit. The LCD display of the wire controller will show the previous working state (except for Timer, Sleep, Swing mode), the operation indicator light on the wire controller will light up.

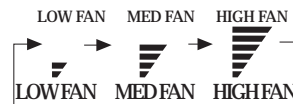
2 Choose of working mode
Press MODE button, each press the working mode will change as the following sequence: AUTO COOLING DEHUMIDIFYING HEATING FAN,



Choose FAN operation.

3 Adjusting FAN SPEED

Press the FAN SPEED button to change fan speed:



Choose the desired fan speed

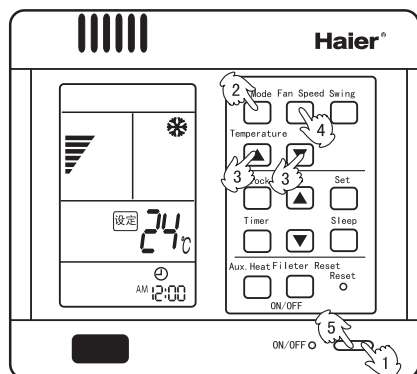
4 Turn off the unit

Press the ON/OFF button to turn off the unit. The wire controller only shows the clock and room temperature.

About FAN operation

FAN operation refers the air conditioner does not perform COOLING and HEATING operation, but FAN operation. In this mode, the air conditioner cannot perform AUOT FAN operation, and does show the temperature value on the wire controller.

Operation instruction



1 Turn on the unit

Press the ON/OFF button to turn on the unit. The LCD display of the wire controller will show the previous working state (except for TIMER, SWING, SLEEP mode). The operation indicator light on the wire controller will light up.

2 Choose of working mode

Press MODE button, each press the working mode will change as the following sequence:



then choose AUTO, COOLING, DEHUMIDIFYING, HEATING operation.

3 Set temperature

Press the TEMP. SET button

- ▲ Each press, the set temperature will increase 1 degree.
- ▼ Each press, the set temperature will decrease 1 degree.

Set the desired temperature.

4 Adjusting FAN SPEED

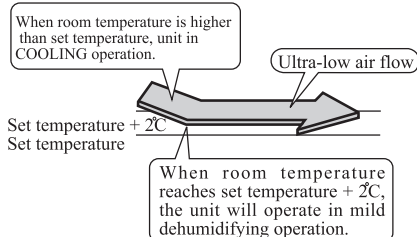
Press the FAN SPEED button,



Choose the desired fan speed.

5 Turn off the unit

Press the ON/OFF button to turn off the unit. The wire controller only shows the clock and room temperature.



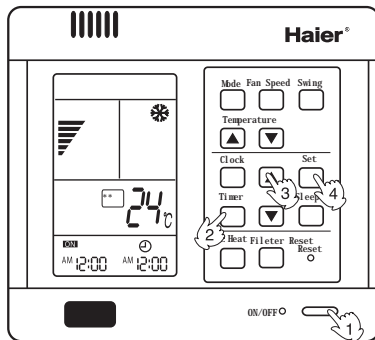
In Heating operation, after start the unit, the air conditioner will sending warm air a moment later to prevent the cold air blowing out. In Dehumidifying, when the room temperature drops 2 higher than the set temperature, regardless the set fan speed, the air conditioner will

Hints:

The wire controller can memorize the working condition of each time. When start the unit for the second time, just need to press ON/OFF button, the air conditioner will work according to the previous working mode. (except for Timer, Sleep and Swing)

Operation instruction Timer On/Off function

Before using TIMER function, calibrate the clock first (referring to page 3). When you wake up in the morning, before going back to home after work or after going to bed, you can let your air conditioner automatically turn on or turn off.

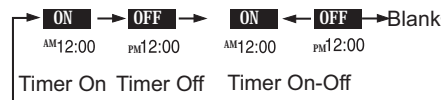


1. Turn on the unit

After turning on the unit, set the desired working mode. The LCD of the wire controller will show working mode. (except for Timer, Sleep, Swing)

2. Set of TIMER mode

Press the TIMER button to change the TIMER mode, each press the TIMER mode will change as the following sequence:



Then choose the timer mode as you need (TIMER ON or TIMER OFF.)

At this time the ON or OFF will flash.

3. Set time

Press the time adjusting button

▲ Each press, the set time increases 10 minutes. If depress the button, the time will increase rapidly.

▼ Each press, the set time decreases 10 minutes. If depress the button, the time will decrease rapidly.

This LCD will show the time set, the time can be adjusted within 24h.

(AM stands for morning, PM stands for afternoon).

4. Confirm the time

After calibration of the clock, press SET button to confirm time.

At this time, the ON or OFF will not flash.

The time displayed is: at x o'clock x minutes the unit will be turned on (TIMER ON) or turned off (TIMER OFF).

■ Cancel TIMER

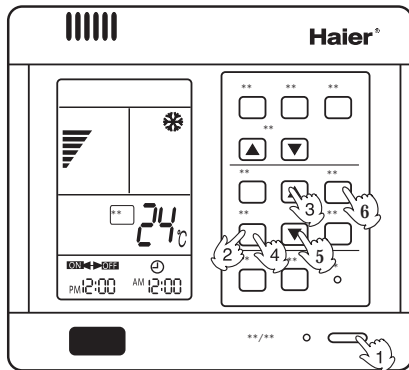
Press the TIMER button several times until the TIMER mode display disappears.

Hints:

After power failure, the clock should be calibrated again.

The wire controller has memory function, when you use this function for the second time, if the time set is the same as the previous one, you just need to choose the TIMER mode then press the SET button to confirm.

Operation instruction Timer On-Off function



1. After turning on the unit, set the proper working mode
The LCD of the wire controller will show working mode.
(except for Timer, Sleep, Swing)

2. Set of TIMER mode

Press the TIMER button to change the TIMER mode, each press the TIMER mode will change as the following sequence:



Then choose the TIMER ON-OFF mode.
At this time the ON will flash.

3. Set the TIMER ON time

Press the time adjusting button

- ▲ Each press, the set time increases 10 minutes. If depress the button, the time will increase rapidly.
- ▼ Each press, the set time decreases 10 minutes. If depress the button, the time will decrease rapidly.
The LCD shows the time set.
It can be adjusted arbitrarily in 24 hours. (AM refers to morning,

4. Confirm the time

After adjusting time, press SET button to confirm time.
At this time, the ON will not flash, OFF begins to flash.
The time displayed is: at x o'clock x minutes the unit will be turned

5. Set the TIMER OFF time

Press the TIME button, the adjustment method is the same as the one of setting TIMER ON time.

6. Confirm the time of TIMER OFF

After adjusting time, press SET button to confirm time.
At this time, the OFF will not flash.
The time displayed is: at x o'clock x minutes the unit will be turned off.

■ Cancel TIMER

- Press the TIMER button several times until the TIMER mode display disappears.
- According to the sequence of TIMER ON & TIMER OFF setting, you can realize turning on unit first, then turning off unit.

Operation instruction

Sleep operation

Before going to bed, you can press the SLEEP button, the air conditioner will operate in comfort sleep mode to make you have a sound sleep.

Before using this function, you should calibrate the clock first, otherwise, the SLEEP function will be out of order.

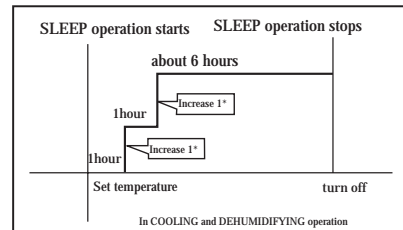
Use of SLEEP function

After turning on the unit, setting the working mode, then press SLEEP button to make the air conditioner have the previous Sleep time (powered on for the first time or after performing Sleep is 1h). The Sleep symbol will appear. Press time ▲/▼ button, you can choose between 1~8h. Each press, it may increase/decrease 1h and will display in the humidity area with \uparrow or \downarrow , and display \uparrow or \downarrow in the Timer Off area and the time to turn off; press Sleep button again to cancel Sleep

Operation modes

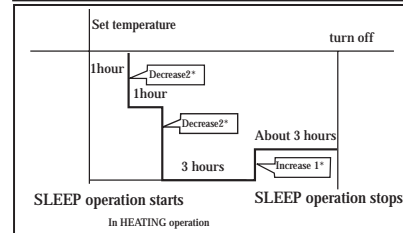
1. In COOLING, DEHUMIDIFYING operation

1 hour later in SLEEP operation, the temperature will increase 1°C from the set temperature, another 1 hour later increase another 1°C, then the unit will operate continuous for 6 hours, then it turns off automatically. The temperature is higher than set temperature to prevent you from getting a cold.



2. In HEATING operation

1 hour later in SLEEP operation, the temperature will decrease 2°C from the set temperature, another 1 hour later increase another 2°C, then the unit will operate continuous at this temperature for 3 hours, then it increases 1°C, after operating at this temperature for another 3 hours, the unit will turn off automatically. The temperature is lower than set temperature to prevent you from feeling uncomfortable during sleep.

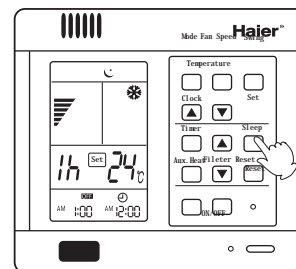


3. In AUTO operation

The air conditioner will operate in the relative Sleep operation according to the operation mode.

4. In FAN operation

SLEEP operation cannot be applied.



Note:

- After setting Sleep function, it is not permitted to adjust clock.
- The Sleep time is less than 8h, after reaching the set time, the unit will automatically stop.
- Set Sleep function after setting \uparrow or \downarrow function, the air conditioner will perform Sleep function.
- After setting Sleep function, the Timer function cannot be set.
- Set Sleep function after setting \uparrow or \downarrow function, the Sleep function can only be set in the set time of Timer On.

Users' Attention

- Do not press tightly with the LCD part of the wire controller to avoid damage of it.
- Set proper room temperature
Not too low or high and make every people in the room feel comfortable.



- Do not let the cold air blows directly to human body for a long time and do not make the room temperature otherwise, it may cause uncomfortable or bad to your health.



- The room should often ventilate. After a long-time of using air conditioner, the room must be ventilated.



- As the character of Heat Pump air conditioner, the heating capacity will decrease with the outside temperature drops.

- Do not keep the doors and windows open otherwise, it may lower the efficiency of the air conditioner.



- Television, radio and acoustics, etc. equipment should keep over 1m from indoor unit and wire controller. Otherwise, they may disturb the image and cause noise.



- In actual installation, because of the influence of neighboring noise and reflection, the noise of the unit generally will be higher than the written value.

- Do not put any heating devices under the indoor unit. The heat may cause the deformation of indoor unit.



- If do not use the air conditioner for a long time, it is necessary to cut off power. If do not cut off power, the unit may consume power. In order to protect the unit, before using the air conditioner again, turning on the power at least 12 hours in advance.



- The windows should be hung with curtains or blinds. Do not let the sun shine directly shine in the room; do not let the outdoor air enter room.



- The articles must keep dry cannot be put under the indoor unit. When the humidity is over 80% or the drainage outlet is blocked, the



- Do not put articles around the air inlet and outlet. This kind of obstacle can lower the efficiency of the air conditioner



- In actual use, the difference of outdoor temperature, room size, room structure and direction will make the capacity and power consumption change of the unit.

- The airflow cannot directly blow to the pets and plants. Otherwise, the pets and plants will be harmed



- The air conditioner can only be used in air conditioning. It can not be used in other purpose. Do not use the air conditioner in some specific purpose, such as storage or protect food, animals, plants, precise instrument and artwork, otherwise, the quality of them may be declined.



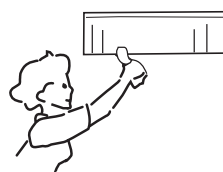
Maintenance

When maintaining, do turn off the manual power switch.

Daily cleaning

Clean air conditioner and wire controller

- Use soft cloth to dry clean
- If there is too much dirt on the air conditioner panel, please soak the cloth with water, and then clean it. (The wire controller cannot use water to clean, it should use dry cloth to clean.)
- It is forbidden to use gasoline, diluent, eradicator powder and chemical dishcloth etc. to clean, otherwise it may cause deformation and crack.

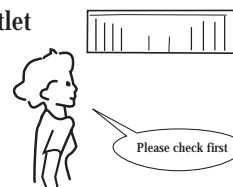


Maintenance after the using season

- In a sunny day and FAN mode, let the unit operate about half a day to make the inner part of the unit dry.
- Turn off the operation switch of the air conditioner, cut off the power switch. Otherwise, even the air conditioner is in OFF state, it will consume certain power.
- Clean the air filter and the system of indoor unit, wash and clean the outdoor unit, and use dustcoat to cover the unit.

Maintenance before the using season

- Check if there are any obstacles in the air inlet and outlet of indoor and outdoor unit to avoid the working efficiency drop.
- Please do install the air filter and insure it is not dirty. Otherwise, the unit is damaged or has trouble due to the dust entry into the unit.
- In heating, in order to protect the compressor in starting the unit, please switch on the power switch of the unit 12 hours in advance before using it, and in using season, please always keep the power switch in ON state.



Troubleshooting

Before as the special repair center for help, please check the following items of the air conditioner

	Symptom	Cause
Not trouble	Hear the sound of water flow	The water flow sound when operation starts; during operation and shortly after operation stops, in 2-3 minutes shortly after the operation starts, sometimes the sound becomes louder. This is the sound of refrigerant flow and the draining sound of condensate water.
	In DEHUMIDIFYING, no air sent out or cannot change the fan speed.	In DEHUMIDIFYING operation, when the room temperature is 2℃ higher than the set temperature, despite of the set FAN SPEED the air conditioner will operate in LOW FAN SPEED.
	Having peculiar smell in the out air	Because the smells generated by wall, carpet, furniture, clothes, cigarette and cosmetic, etc. attached on the air conditioner.
	The stopped indoor unit gives out sound, white vapor or cold air.	In order to prevent the oil and refrigerant from resorting in the indoor unit, there is refrigerant flow in very short time, so they give out iSha, Shaī, iGulu, Guluī. Additionally, when the other indoor units perform HEATING operation, sometimes white vapor appears; when the other indoor units perform COOLING operation, cold air appears.

If there is the following symptom and check they are the following causes, please solve them according to the below given methods.

Symptom	Causes	Solution
The unit does not work	The fuse is blown out or the breaker is open-circuit.	Change fuse or close breaker
Once the unit starts, it stops immediately	The air inlet or outlet of indoor and outdoor unit is blocked	Remove the obstacle
Abnormal COOLING or HEATING	The air inlet or outlet of indoor and outdoor unit is blocked	Remove the obstacle
	Improper set temperature	Refer to page 7
	The fan speed is set too low	Refer to page 7
	Doors or windows are open	Close them
	Direct sunshine. (COOLING)	Hang curtains or blinds before window
	Too much people in room (COOLING)	
Too many heat sources in room (COOLING)		

Trouble Contents	Code Displayed
Indoor temperature sensor trouble	F1
Inner pipe coil sensor trouble (thin pipe)	F2
Inner pipe coil sensor trouble (thick pipe)	F4
High pressure trouble (pressure)	F5
Drainage trouble	F6

If after the above checking and treatment, the air conditioner still cannot work normally, or find the following phenomena, please stop the unit and contact the commissioned service center.

- The fuse or breaker is often blown out or open circuit.
- In COOLING or DEHUMIDIFYING, there is water leakage.
- Abnormal operation or abnormal sound be heard.
- The display screen of the wire controller shows trouble code indicating the unit has trouble.

When Troubles Occur

- Before installing, do read this **Safety precautions** carefully to guarantee the proper installation.
- The below attentive matters are divided into **Warning** and **Note** two parts. When the wrong installation occur, it is very possible death and severe injury and other serious accidents will happen. For those items are listed in **Warning** part. But even the items listed in **Note** part can also cause serious accidents. Above all, both the two parts are very important contents related to safety, so they must be obeyed.
- After finishing the installation work, do test run to verify everything is normal. After that please explain the using and maintenance methods to the user. Additionally, give this installation manual and operation manual to the user and ask them to keep it properly.

Warning

- The commissioned repair center shall do the installation work. If you do the installation work by yourself, the improper installation will cause water leakage, electric shock fire and other accidents.
- The installation work shall be in line with what the installation manual specified. If installation is not proper, water leakage, electric shock, fire and other accidents will occur.
- Install the air conditioner to a place where can definitely stand its weight. The air conditioner can not be installed on a nonmetal bracket (such as theft guard net). Places not firm enough will cause drop down of unit resulting in body hurt.
- The installation work shall be preventive to typhoon and earthquake. If the installation work is not met with the requirements, overturn of the unit will occur resulting in accidents.
- Using the specified cable to do wiring work and connecting firmly and properly. Fix the connecting part of the terminals to prevent it from the external force. Improper connection and fixing will cause heating and fire etc. accidents.
- Wiring shall be kept in correct shape avoiding extrusion. After installation, the electric box cover and the external panel shall not nip the wire. Improper installation will cause heating and fire etc. accidents.
- When setting or moving the air conditioner do not let the air and things alike get into the refrigeration system except the specified refrigerant (R22). If air and other things enter, abnormal high pressure will occur, which easily cause break and body injuries etc. accidents.
- When installing, do use the accessories or specified parts. If not using the parts specified by our company, water leakage, electric shock, fire and refrigerant leakage will occur.
- Do not lead the drain hose to drain where the sulfur gas may be involved. Otherwise, the poisonous gas will enter into the indoor.
- During installation, if refrigerant leakage occurs, do the ventilation work immediately. As soon as the refrigerant gas meets fire, poisonous gas will be produce.
- After installation, confirm there is no leakage of refrigerant. If the refrigerant gas enters into room and meet the air blowing heater, heater or stove etc. fire source, the poisonous gas may be produced.
- Do not install the unit in a place where the combustible gas may be leaked. In any case the combustible gas leaks and accumulated around the unit, fire accident will occur.
- The drain hose should be correctly installed according to the installation manual to ensure smooth drainage, and take proper heat preservation measure to prevent from dew. Improper pipe installation may cause water leakage result in wet the indoor articles.
- Do heat insulation work to the refrigerant gas pipes and liquid pipes to reach the purpose of heat preservation. If the heat insulation measure is not sufficient, water generated by condensing dew will drip leading to wet the floor and indoor articles.

Notice

- Do grounding work. Do not connect the grounding wire to gas pipe, tap, lighting rod or telephone line. Improper grounding will cause electric shock.
- In some places the creepage breaker shall be installed. If do not install the breaker, electric shock may occur.
- After electric installation, power on them to do electric leakage test.

Installation instruction

△ Notice

This manual can not include all kinds of conditions, if you have new requirements and questions, please contact with local Haier Sales Center.

△ Warning

Before installing the unit, please read this manual carefully. Improper installation may cause accidents and make unit damage or death.

Installation tools

- | | |
|-------------------------------|---------------------------------|
| 1. Screwdriver | 2. Steel saw |
| 3. 60mm 70mm diameter drill | 4. Spanner (diameter 17,27mm) |
| 5. Spanner (14, 17, 19, 27mm) | 6. Pipe cutter |
| 7. Pipe flarer | 8. Knife |
| 9. Pincers | 10. Leakage detector/soap water |
| 11. Tape measure | 12. Scraper |







Standard accessories

The following parts mentioned in this manual are self-provided installation parts.

Mark	A	B	C	D	E	F
Name of parts	Adhesive tape	Pipe supporting plate	Connection pipe	Drain hose	Nonfibulous thermal insulation material	Plaster powder

Accessories attached with the unit

The following lists the accessories attached with the unit, please use them according to the installation needs.

NO.	①	②	③	④	⑤	⑥
Shape & name	Wire controller 	Signal wire 	Gasket 	Wire clamp 	Thermal insulation pipe 	Manual 
Amount	1	1	8	*	2	1

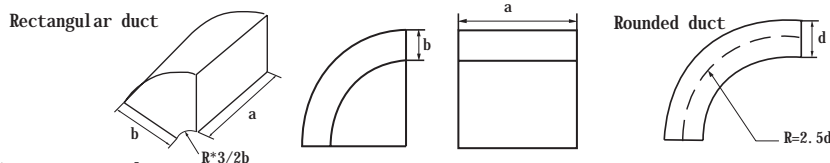
Installation instruction

1. Installation of Duct

1) Duct material

Type	Material	Structural characteristic	Main use
Thin metal sheet	Normal thin steel	Good processing performance and structural hardness	
	Galvanize steel	Good anticorrosive performance	Generally used in ventilation duct system
	Aluminum or alloy	Good processing performance, corrosion resistant, uneasily sparkle	Storm protection system in ventilation engineering
	Stainless steel	Anticorrosive, acid-resistant	Anti-corrosive ventilation engineering in chemical industry
	Aluminum foil soft metal duct	Soft with compression resistant, simple installation with vibration resistance	Widely used
	Plastic compound steel	Sprayed a layer of 0.2-0.4mm plastic on the normal thin steel	Air conditioning system needing good dust protection and anti-corrosive system under 10-70*
Nonmetal material	Stiff PVC plastic	Anti-corrosive, glazed surface, easy production	Applicable to the ambient condition of 0*60 *, ventilation system with corrosion of acid gas
	Glass fibre reinforced plastic	With light, high intensity, noncombustible, anti-corrosive, high temperature resistant characteristic	Anti-corrosive, glazed surface, easy production

2) Sectional shape of duct (mainly has rounded and rectangular two shapes)

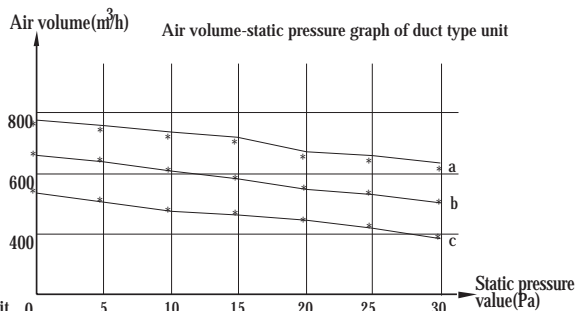


3) Connecting mode

The dimension of rectangular duct is the same as the air outlet of indoor unit, can be directly connected; the rounded duct needs to be added with a static pressure box to connect with the air sending outlet of indoor unit; independently introduced to respective distributor by rounded duct. In order to meet the requirements of room air conditioner, the fan speed in each air outlet of any distributor shall be adjusted to basically the same.

4) Installation parameter

Diameter of duct*mm)	200	
Rectangular duct	H(mm)	100
	L(mm)	700
Out unit static pressure (Pa)	30	
Number of duct outlet	1-2	
Duct length (m)	4	
Noise dB(A)	40/38/36	
Recommended applicable area(m ²)	14*25	
Partial resistance of distributor(Pa)	25	
Resistance along duct (Pa/m)	1.2	



Air volume-static pressure of duct type unit

Speed	Static pressure (Pa)						
	0	5	10	15	20	25	30
High speed	788	763	740	716	687	663	632
Medium speed	669	642	615	587	567	538	512
Low speed	543	519	480	463	442	418	390

Cutline	
—*—	High speed
—*—	Medium speed
—*—	Low speed

Installation procedure

Install indoor unit

Notice

- Do not install the air conditioner at the place where the combustible gas maybe leak. In case of the leaked gas gather around the unit, it may cause fire accident.



The indoor unit should be installed in the place where the cool air and warm air may evenly circulate.

Avoid the following places:

- Place with too much salinity (coastal area).
- Place with too much sulfuration gas (mainly is the hotspring area, the copper pipe and brazed part are easily corroded).
- Place with too much oil (including mechanical oil) and vapor.
- Place using organic solvent.
- Place with machines may generate high frequency electromagnetic waves. (The control system may have abnormality)
- Place near the doors or windows that come close to the external high humidity air. (may easily form dew)
- Place where the special sprayer may be frequently used.
- On vehicles, boats and ships.
- Place less than 1m away from TV, radio, radio devices and fluorescent lamp.

Indoor unit

1. Choose the place where the air from the air conditioner can spread throughout the room and where the connection pipe, connection wire and drain hose may be easily arranged to the suitable outdoor position.
2. Choose the place where the vertical distance between the center of air outlet and the ground is no more than 2.7m.
3. The structure of the ceiling should be firm enough to bear the weight of the unit.
4. The connection pipe, drain hose and connection wire can penetrate through the wall and connect indoor and outdoor unit.
5. The connection pipe and drain hose between indoor and outdoor unit should be as short as possible.
6. The connection flare should be provided by user.

Safety precautions

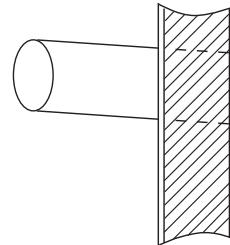
1. For those models with electric heat function, it is forbidden to directly connect the air outlet with canvas and material alike inflammable interfaces.
2. When installing indoor unit, it is necessary to leave a checking hole for convenient repair.

Installation procedure

Install indoor unit

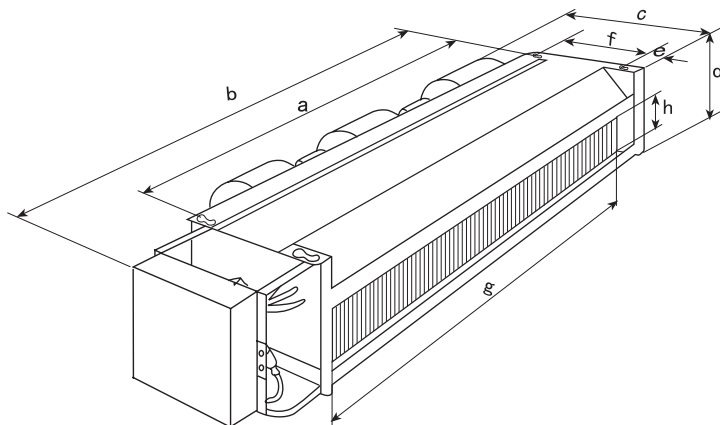
After choosing the installation position, perform the following procedures:

1. Cut a hole in the wall, put the connection pipe and wire through a locally bought PVC pipe penetrating through the wall. The wall hole should be slightly slant downwards toward outside, the slant degree should be at least 1/100. (as Figure 1 shown)
2. Before cutting the wall hole, check and insure there is no pipe or steel at the right back of the wall hole. Avoid cutting the hole in the place with electric wire or duct.
3. Hang the unit on a firm and level roof. If the base of the unit is not firm, it may cause noise, vibration or leakage. (as Figure 6 shown)
4. Support the unit firmly and reliably.
5. Change the shape of connection pipe, connection wire and drain hose to make them easily pass through the wall hole.



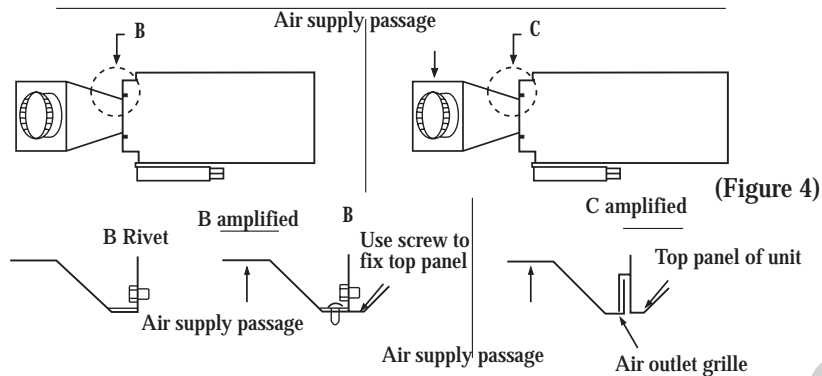
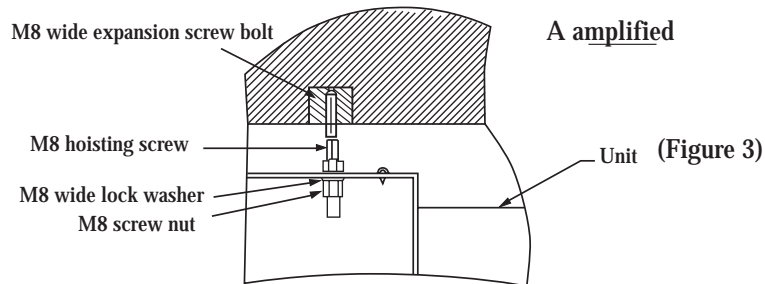
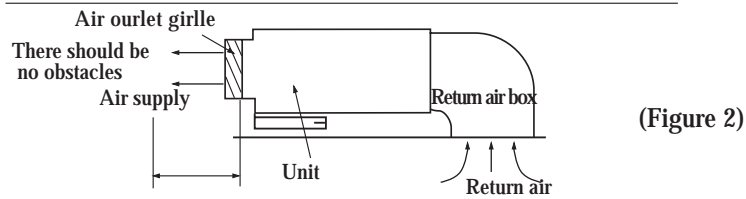
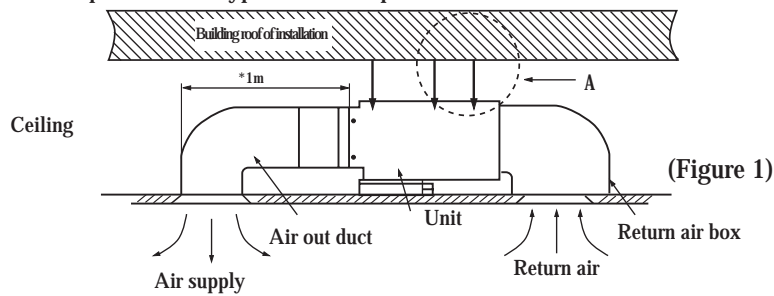
Installation dimension: (Unit: mm)

a	b	c	d	e	f	g	h
730	941	450	225	50	225	700	100



Installation procedure Install indoor unit

- When install the duct hidden type indoor unit, the return air box must be designed and installed, as Figure 1, Figure 2.
- The distance between the air outlet of duct and the air outlet of air conditioner should be no more than 1m (when the out unit static pressure is 0Pa).
- Low static pressure duct type: max static pressure is 30Pa.



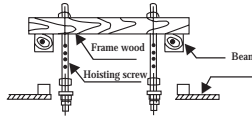
Installation procedure Install indoor unit

Install the hoisting screw

Use M8 or M10 hoisting screw (4, prepare on site) (When the height of hoisting screw is more than 0.9m, you must use M10), their gaps refer to the dimension of air conditioner, according to the original structure and the following method to install.

wood structure

Put up the frame wood on the beam and mount the hoisting screws.



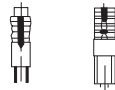
New cement panel

Use embedded parts and foot screw, etc to mount.



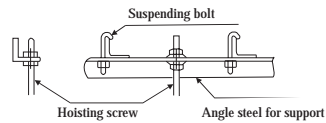
Original cement panel

Use the in hole hinge, in hole plug or in hole screw.



Steel structure

Directly use angle steel or new angle steel for support.



Suspending of indoor unit

- Fix the cap of hoisting screw on and suspend them on the T groove of the hoisting part of the unit.
- Use gradienter to keep the level degree of the unit within 5mm.

Installation procedure

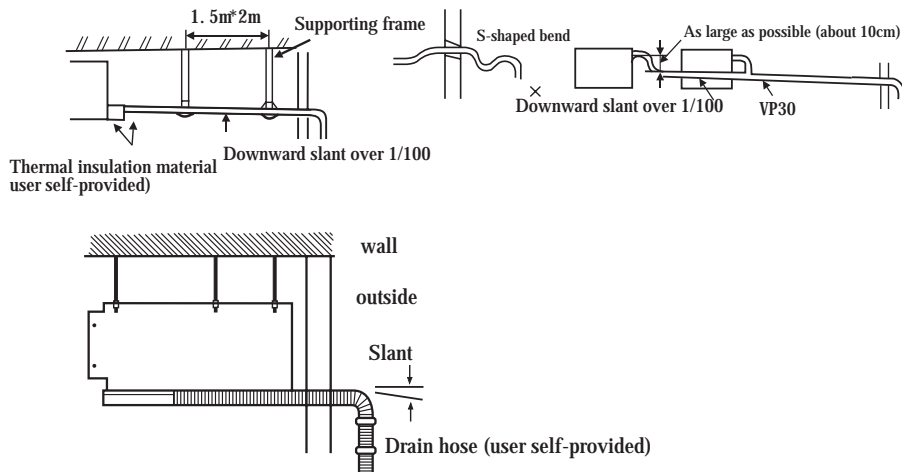
Install indoor unit

Notice

- In order to normally drain water, the drain hose should be mated according to the installation manual. In order to avoid dew-forming, thermal insulation treatment should be done. Improper connection pipe may cause water enter indoor.

Requirements:

- The indoor side drain hose should be thermal insulated.
- The parts connected with indoor unit should be thermal insulated. Improper thermal insulation may cause dew-forming phenomenon.
- The drain hose should be downwards slant (over 1/100) and there should be no S-shaped bend. Otherwise, abnormal sound may occur.
- The horizontal length of the drain hose should be less than 20m. If the connection pipe is too long, the supporting frame should be set every 1.5~2m to prevent pipe from rise and fall.
- For the centralized connection pipe, please perform work as the following Figure shown.
- Pay attention not to exerting external force to the connection part of the drain hose.



Material of connection pipe and thermal insulation

Material of connection pipe	Stiff PVC pipe VP 20mm (inside diameter)
Material of thermal insulation	Foam polyethylene pipe, thickness over 10mm

Confirm drainage

Perform test run to insure the condition of drainage, the connection part of the connection should not leak water. The confirmation must be performed even if install in winter.

Installation procedure Install indoor unit

⚠ warning

- During installation, if refrigerant leakage occurs, please immediately take ventilation measure. If the refrigerant gas meet the fire, it may generate poisonous gas.
- After finishing installation work, please make sure there is no refrigerant leakage. If the leaked refrigerant gas meet heater and oven, etc. fire sources, it may generate poisonous gas.

Permitted length and fall of connecting pipe

Depending on the outdoor units, for details, please refer to the attached manual of outdoor unit.

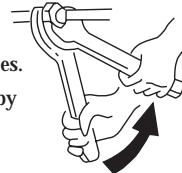
Material and dimension of connecting pipe

Material of connecting pipe	Phospor deoxy copper seamless pipe used in air conditioner (TP ₂)	
Dimension of connecting pipe (mm)	Gas side	∅ 12.7
	Liquid side	∅ 6.35

Connection of refrigerant pipe

Two spanners operation

- Perform connection of flared pipe to connect all the refrigerant pipes.
- The connection of indoor unit connecting pipe must be performed by two spanners.
- For installation torque, please refer to the following table.



External diameter of connecting pipe(mm)	Installation torque (N.m)	Tightening torque (N.m)
∅ 6.35	11.8 (1.2kgf. m)	13.7 (1.4kgf. m)
∅ 12.7	49.05 (5.0kgf. m)	53.9 (5.5kgf. m)

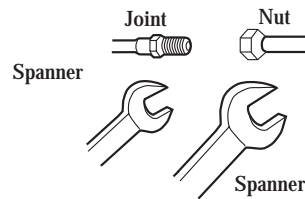
Installation procedure

Connection of pipe

1. Connection of pipe

Connection method

- The connecting pipe max length of KRD-32N is 15m, and the max fall between indoor and outdoor unit is 5m; the connecting pipe max length of KDR-70N is 50m, the max fall between indoor and outdoor unit is 30m. The max fall between two indoor units in one system is 10m.
- In order to guarantee the efficiency, the pipe should be as short as possible.
- Daub the refrigerant oil on the joint and the flared nut.
- When bending the pipes, give the roundness as large as possible, to avoid crashing the pipes.
- To connect the pipe, fit the center and use hand to screw the nut, then use spanner to tighten the nut, as shown in figure.
- Pay attention not to let alien matters, such as sand, vapor get into the pipe.
- The connection of indoor unit pipe must be performed by using two spanners.



If do not fit the center and screw the nut hard, the screw thread may be damaged, which will cause refrigerant leakage.

2. The additional charging amount of refrigerant

- The additional charging of refrigerant (R22) should be complied with the installation manual of outdoor unit. It must use measurer to quantificationally charge. The a dditional charging amount must be complied with the specified amount. Requirements: Both excessive charging and less charging of refrigerant will cause the compressor trouble. It must be complied with the specified amount.

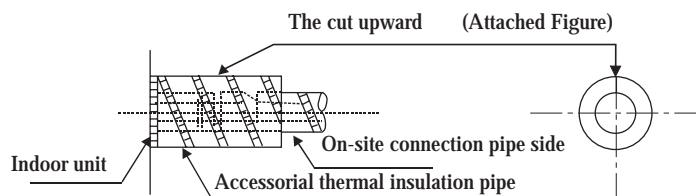
3. For discharging, please refer to outdoor unit

4. Leakage detection

- Use leakage detector or soap water to check if the connected part of the connection pipe and the valve cap leak.

5. Thermal insulation treatment

- The thermal insulation of connection pipe should be performed at both gas side and liquid side. In COOLING, both liquid side and gas side are in low temperature, in order to prevent dew from forming, thermal insulation should be done.
- The thermal insulation material at the gas side must use the material with the heat resistant temperature over 120°C.
- The connected part of indoor unit connection pipe should be thermal insulated.



Installation procedure

Electric wiring

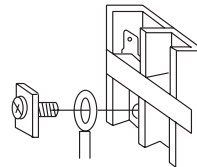
Note:

- All the wires should be copper core wires.
The power cable of indoor unit should be equipped according to the operation manual of indoor unit.
- Before finishing vacuumizing the refrigerant pipe system, do not supply power to indoor unit.
- When connecting the indoor & outdoor wire, check the number of the indoor & outdoor terminals, the terminals with the same number connected together with same one wire.
- Incorrect wiring will damage the controller of the air conditioner or make the unit work abnormally.
- The air conditioner must use special power circuit and special air switch (40A), grounding wire. The wiring work should be done by a qualified electrician according to the national wiring rule.
- The creepage breaker must be installed. The grounding line and the null line of the receptacle must be strictly separated. It is incorrect to connect the null line with the grounding line.
- The connection type of power cord is Y connection. If the soft power cord is damaged, to avoid risk, it must be replaced by the manufacturer or their specific repair department or similar professional worker.

Wiring method

1. The wiring method of orbicular terminal

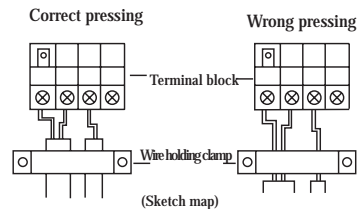
For the connection wire which end is orbicular terminal, its wiring method is as the right figure shown. Dismantle the screw and put it through the ring at the end of the connection wire, then connect it to the terminal block and tighten the screw.



The wiring method of orbicular terminal

2. The wiring method of straight terminal

For those connection wires whose end are not orbicular terminals, their wiring method is: Loosen the connecting screw, insert the end of the wire directly into the terminal block, and then tighten screw. Pull the wire outwards slightly to confirm it is held tightly.

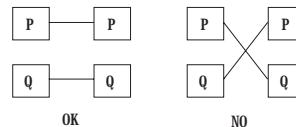
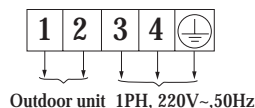


(Sketch map)

3. Pressing method of connection wire:

After wiring, the connection wire must be pressed with wire holding clamp. The wire holding clamp should press on the out cover of the connection wire. As the right figure shown:

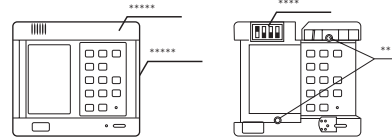
- The indoor and outdoor unit shall respectively use special power circuit.
- The indoor units connected with the same outdoor unit, its creepage breaker and switch shall be connected to the same power circuit.
- The communication wire of indoor and outdoor unit is 2-core twisted-pair with polarity. (as right figure shown)
- The indoor and outdoor unit shall respectively use special power circuit.



Installation procedure Install wire controller

1. Remove the upper cover of wire controller

The PC board is installed on the back cover of wire controller. When remove the upper cover, pay attention not to damage PC board.



2. Install wire controller

Drill 2 wall holes according to the position of the 2 screw holes on the back cover of wire controller, then hit wood in the wall holes. Put the 2 screw holes on the back cover of wire controller properly to its corresponding wood, then use wood screws to fix the back cover on the wall.

Note:

Install the back cover of wire controller on the even wall as possible as can. When tightening the wood screw, do not use to tight force, otherwise the wire controller may be damaged.

Switch

Mark	ON	OFF
1	Fixed frequency	Inverter
2	Have rise and drop	No rise and drop
3	Swing	No Swing
4	The collection temperature of main panel	The collection temperature of panel

Note:

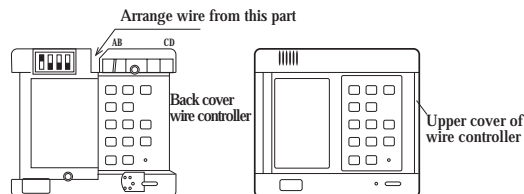
When connecting wire, please keep a certain distance between signal wire and electric wire. (over 10mm)

Under this series, the switch is set as:

1.ON 2. OFF 3. OFF 4.OFF

3. Indoor unit wire connection

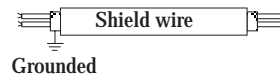
Connect the terminals (A, B, C, D,) on the wire controller to the terminals on the indoor PC panel (A, B, C, D,) respectively.



Dimension of signal wire:

Type of wire	Shield wire (4 cords)
Dimension	0.33 mm ²

The connection between indoor unit and wire controller and indoor unit and outdoor unit should use shield wire. And the two ends of the shield wire should be grounded, otherwise, the disturbance will cause unit abnormal operation.



Note:

Confirm the connection part of terminals is firm and will not touch shield wire.

4. Cover the wire controller upper cover

Pay attention not to press the connection wire.

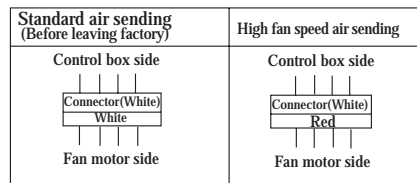
Note: Do not touch PC board by hand.

Installation procedure Other instruction and test

Other instruction

Set of the air sending of the fan motor

Before leaving factory, the rotation speed of fan motor has already been set at standard choice. When the indoor unit uses free air sending and not needing to connect with duct, the fan speed of indoor unit is set at standard choice. When the indoor unit needs to connect with duct, please according to the following figure shown to change the connection of the connector installed on the side of electric box.



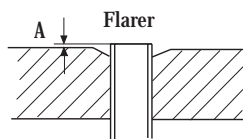
The relative relation between fan speed and static pressure

Unit: Pa	
Standard fan speed	High fan speed
0	30

Cut and flaring method

Use pipe cutter to cut the pipe, the burrs must be removed. After inserting the flarer, perform flared nut.

Connecting pipe	Pipe diameter	Dimension A (mm)
Liquid pipe	6.35mm(1/4")	0.8~1.5
Gas pipe	12.7mm(1/2")	1.0~1.0



Correct	Incorrect				
	Slant	Broken	Burrs	Uncompleted	Too long

The following items must be noticed carefully during installation.
After finishing installation, performing checking.

- After installing the refrigerant pipe, drain hose and electric wire properly, perform test run to ensure the system not have trouble.

Test run

It is necessary the installer perform the test run for one time to check if the unit works normally.